

marked-up Sequence Listing

SEQUENCE LISTING

(1) GENERAL INFORMATION

(111) NUMBER OF SEQUENCES: 125

<210> (2) INFORMATION FOR SEQ ID NO: 1:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 60 base-pairs
 <212> (B) TYPE: nucleic-acid DNA
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

<400> (i) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

CTCTCTCACT TGGACCTGTG CCATGGCCGG CTGGGGCGCA TAGAATGGAA
 CAACTAAAGC

<210> (2) INFORMATION FOR SEQ ID NO: 2:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 92 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

<400> (i) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

Met Ala Glu Glu Arg Pro Tyr Ala Cys Pro	5	10
Val Glu Ser Cys Asp Arg Arg Phe Ser Arg	15	20
Ser Asp Glu Leu Thr Arg His Ile Arg Ile	25	30
His Thr Gly Gln Lys Pro Phe Gln Cys Arg	35	40
Ile Cys Met Arg Asn Phe Ser Xaa Xaa Xaa	45	50
Xaa Leu Xaa Xaa His Xaa <u>Asp</u> -Thr His Thr	55	60
Gly Glu Lys Pro Phe Ala Cys Asp Ile Cys	65	70
Gly Arg Lys Phe Ala Arg Ser Asp Glu Arg	75	80
Lys Arg His Thr Lys Ile His Leu Arg Gln	85	90
Lys Asp		

<210> (2) INFORMATION FOR SEQ ID NO: 3:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 26 base-pairs
 <212> (B) TYPE: nucleic-acid DNA
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

<400> (i) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

TATGACTTGG ATGGGAGACC GCCTTGG

<110> CH00, Yen

KLUG, AaronSANCHEZ-GARCIA, Isidro

<120> BINDING PROTEINS FOR RECOGNITION OF DNA

<130> 8325-2001.30 (GI-US3)

<140> 10/033, 129

<141> 2001-12-27

50 <150> 08/793, 408

<151> 1997-06-02

<150> PCT/GB95/01949

<151> 1995-08-17

<160> 125

<170> PatentIn version 3.2

<220>

<221> MISC - FEATURE

<222> (48) ... (51)

<223> Xaa = any amino acid

<220>

<221> MISC - FEATURE

<222> (53) ... (54)

<223> Xaa = any amino acid

<220>

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<222> (56) ... (56)

<223> Xaa = any amino acid

<220>

<221> MISC - FEATURE

<222> (57) ... (57)

<223> Xaa = Arg or Lys

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(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 28 base-pairs
<212> (B) TYPE: nucleic-acid DNA
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

AATTCCAGGC GGTCTCCCAT CCAAGTCA

28

<210> (2) INFORMATION FOR SEQ ID NO: 5:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 21 base-pairs
<212> (B) TYPE: nucleic-acid DNA
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

TATATAGCGT GGGCGTATAT A

21

<210> (2) INFORMATION FOR SEQ ID NO: 6:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 24 base-pairs
<212> (B) TYPE: nucleic-acid DNA
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

GCGTATATAC GCCCACGCTA TATA

24

<210> (2) INFORMATION FOR SEQ ID NO: 7:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 21-base-pairs
<212> (B) TYPE: nucleic-acid DNA
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

TATATAGCGN NNGCGTATAT A

21

<220>
<221> misc-feature
<222> (10)...(12)

<223> n is a, c, g or t

<210> (2) INFORMATION FOR SEQ ID NO: 8:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 24-base-pairs
<212> (B) TYPE: nucleic-acid DNA
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

GCGTATATAC GCNNNCGCTA TATA

24

<220>
<221> misc-feature
<222> (13)...(15)
<223> n is a, c, g or t

<210> (2) INFORMATION FOR SEQ ID NO: 9:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 33-base-pairs
<212> (B) TYPE: nucleic-acid DNA
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

TTCCATGGAG ACGCAGAAGC CCTTCAGCGG CCA

33

<210> (2) INFORMATION FOR SEQ ID NO: 10:

(1) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 33 base-pairs

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<212> (A) TYPE: nucleic-acid DNA
 (B) STRANDEDNESS: single
 (D) TOPOLOGY: linear

<400> (i) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

TTCCATGGAG ACCGAGCTGA GTTCCCTCACCG CCA

33

<210> (i) INFORMATION FOR SEQ ID NO: 11:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 33 base-pairs
<212> (A) TYPE: nucleic-acid DNA
 (B) STRANDEDNESS: single
 (D) TOPOLOGY: linear

<400> (i) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

CCCCCTTTCTC TTCCAGAACG CCTTCAGCGG CCA

33

<210> (i) INFORMATION FOR SEQ ID NO: 12:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 33 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown
 (ii) MOLECULE TYPE: peptide

<400> (i) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

Met Ala Glu Glu Lys Pro Phe Gln Cys Arg
 5 10

Ile Cys Met Arg Asn Phe Ser Asp Arg Ser
 15 20

Ser Leu Thr Arg His Thr Arg His Thr Gly
 25 30

Glu Lys Pro

<210> (i) INFORMATION FOR SEQ ID NO: 13:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 33 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown
 (ii) MOLECULE TYPE: peptide

<400> (i) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

Met Ala Glu Glu Lys Pro Phe Gln Cys Arg
 5 10

Ile Cys Met Arg Asn Phe Ser Glu Arg Gly
 15 20

Thr Leu Ala Arg His Glu Lys His Thr Gly
 25 30

Glu Lys Pro

<210> (i) INFORMATION FOR SEQ ID NO: 14:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 27 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: linear
 (ii) MOLECULE TYPE: peptide

-continued

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 14:

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe
5									10

Ser	Gln	Gly	Gly	Asn	Leu	Val	Arg	His	Leu
15									20

Arg	His	Thr	Gly	Glu	Lys	Pro			
							25		

<210> (+2) INFORMATION FOR SEQ-ID-NR: 15:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 26 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 15:

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe
5									10

Ser	Gln	Ala	Gln	Thr	Leu	Gln	Arg	His	Leu
15									20

Lys	His	Thr	Gly	Glu	Lys				
						25			

<210> (+2) INFORMATION FOR SEQ-ID-NR: 16:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 26 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 16:

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe
5									10

Ser	Gln	Ala	Ala	Thr	Leu	Gln	Arg	His	Leu
15									20

Lys	His	Thr	Gly	Glu	Lys				
						25			

<210> (+2) INFORMATION FOR SEQ-ID-NR: 17:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 26 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 17:

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe
5									10

Ser	Gln	Ala	Gln	Asp	Leu	Gln	Arg	His	Leu
15									20

Lys	His	Thr	Gly	Glu	Lys				
						25			

<210> (+2) INFORMATION FOR SEQ-ID-NR: 18:

-continued

(i) SEQUENCE CHARACTERISTICS:

<211> (a) LENGTH: 89 amino-acids

<212> (b) TYPE: amino-acid PRT

(c) STRANDEDNESS:

(d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: protein

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID-NR: 18:

Met	Ala	Glu	Glu	Lys	Pro	Phe	Gln	Cys	Arg
5									10

Ile	Cys	Met	Arg	Asn	Phe	Ser	Asp	Arg	Ser
		15							20

Ser	Leu	Thr	Arg	His	Thr	Arg	Thr	His	Thr
		25							30

Gly	Glu	Lys	Pro	Phe	Gln	Cys	Arg	Ile	Cys
	35								40

Met	Arg	Asn	Phe	Ser	Asp	Arg	Ser	His	Leu
	45								50

Thr	Arg	His	Thr	Arg	Thr	His	Thr	Gly	Glu
	55								60

Lys	Pro	Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg
	65								70

Asn	Phe	Ser	Asp	Arg	Ser	Asn	Leu	Thr	Arg
	75								80

His	Thr	Arg	Thr	His	Thr	Gly	Glu	Lys
								85

<210> (2) INFORMATION FOR SEQ-ID-NR: 19:

(i) SEQUENCE CHARACTERISTICS:

<211> (a) LENGTH: 10 amino-acids

<212> (b) TYPE: amino-acid PRT

(c) STRANDEDNESS:

(d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ-ID-NR: 19:

Arg	Ser	Asp	His	Leu	Thr	Thr	His	Ile	Arg
5									10

<210> (2) INFORMATION FOR SEQ-ID-NR: 20:

(i) SEQUENCE CHARACTERISTICS:

<211> (a) LENGTH: 10 amino-acids

<212> (b) TYPE: amino-acid PRT

(c) STRANDEDNESS:

(d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID-NR: 20:

Arg	Val	Asp	Ala	Leu	Glu	Ala	His	Arg	Arg
5									10

<210> (2) INFORMATION FOR SEQ-ID-NR: 21:

(i) SEQUENCE CHARACTERISTICS:

<211> (a) LENGTH: 10 amino-acids

<212> (b) TYPE: amino-acid PRT

(c) STRANDEDNESS:

(d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> +(i) SEQUENCE DESCRIPTION: SEQ-ID-NO: 21:

Gln Arg Ala Ser Leu Ala Ser His Met Arg
 5 10

<210> +(i) INFORMATION FOR SEQ-ID-NO: 22:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> +(i) SEQUENCE DESCRIPTION: SEQ-ID-NO: 22:

Asn Arg Asp Thr Leu Thr Arg His Ser Lys
 5 10

<210> +(i) INFORMATION FOR SEQ-ID-NO: 23:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> +(i) SEQUENCE DESCRIPTION: SEQ-ID-NO: 23:

Gln Lys Gly His Leu Thr Glu His Arg Lys
 5 10

<210> +(i) INFORMATION FOR SEQ-ID-NO: 24:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> +(i) SEQUENCE DESCRIPTION: SEQ-ID-NO: 24:

Gln Ser Val His Leu Gln Ser His Ser Arg
 5 10

<210> +(i) INFORMATION FOR SEQ-ID-NO: 25:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> +(i) SEQUENCE DESCRIPTION: SEQ-ID-NO: 25:

Arg Leu Asp Gly Leu Arg Thr His Leu Lys
 5 10

<210> +(i) INFORMATION FOR SEQ-ID-NO: 26:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID-NUM: 26:

Thr Pro Gly Asn Leu Thr Arg His Gly Arg
 5 10

<210> (2) INFORMATION FOR SEQ-ID-NUM: 27:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID-NUM: 27:

Asn Gly Gly Asn Leu Gly Arg His Met Lys
 5 10

<210> (2) INFORMATION FOR SEQ-ID-NUM: 28:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID-NUM: 28:

Arg Ala Asp Ala Leu Met Val His Lys Arg
 5 10

<210> (2) INFORMATION FOR SEQ-ID-NUM: 29:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID-NUM: 29:

Asn Gln Ser Asn Leu Glu Arg His His Arg
 5 10

<210> (2) INFORMATION FOR SEQ-ID-NUM: 30:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID-NUM: 30:

Asp Arg Ser Asn Leu Glu Arg His Thr Arg
 5 10

<210> (2) INFORMATION FOR SEQ-ID-NUM: 31:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID-NR: 31:

Arg Ser Asp Thr Leu Lys Lys His Gly Lys
5 10

<210> (2) INFORMATION FOR SEQ-ID-NR: 32:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID-NR: 32:

Gln Gln Ser Asn Leu Val Arg His Gln Arg
5 10

<210> (2) INFORMATION FOR SEQ-ID-NR: 33:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID-NR: 33:

Asn Gly Ala Asn Leu Glu Arg His Arg Arg
5 10

<210> (2) INFORMATION FOR SEQ-ID-NR: 34:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID-NR: 34:

Arg Glu Asp Ala Leu Thr Ser His Glu Arg
5 10

<210> (2) INFORMATION FOR SEQ-ID-NR: 35:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID-NR: 35:

Arg Gly Asp His Leu Lys Asp His Ile Lys
5 10

<210> (2) INFORMATION FOR SEQ-ID-NR: 36:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

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<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

Arg Gly Pro Asp Leu Ala Arg His Gly Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 37:

(i) SEQUENCE CHARACTERISTICS:
 <211> (a) LENGTH: 10 amino acids
 <212> (b) TYPE: amino acid PRT
 (c) STRANDEDNESS:
 (d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

Arg Glu Asp Val Leu Ile Arg His Gly Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 38:

(i) SEQUENCE CHARACTERISTICS:
 <211> (a) LENGTH: 10 amino acids
 <212> (b) TYPE: amino acid PRT
 (c) STRANDEDNESS:
 (d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

Arg Ser Asp Leu Leu Gln Arg His His Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 39:

(i) SEQUENCE CHARACTERISTICS:
 <211> (a) LENGTH: 10 amino acids
 <212> (b) TYPE: amino acid PRT
 (c) STRANDEDNESS:
 (d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

Arg Gln Asp Thr Leu Val Gly His Glu Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 40:

(i) SEQUENCE CHARACTERISTICS:
 <211> (a) LENGTH: 10 amino acids
 <212> (b) TYPE: amino acid PRT
 (c) STRANDEDNESS:
 (d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

Arg Ala Ala Asp Leu Asn Arg His Val Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 41:

(i) SEQUENCE CHARACTERISTICS:
 <211> (a) LENGTH: 10 amino acids
 <212> (b) TYPE: amino acid PRT
 (c) STRANDEDNESS:
 (d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> ~~(xi)~~ SEQUENCE DESCRIPTION: SEQ_ID_NO: 41:Ser Gln Gly Asn Leu Gln Arg His Gly Arg
5 10<210> ~~(2)~~ INFORMATION FOR SEQ_ID_NO: 42:

~~(i)~~ SEQUENCE CHARACTERISTICS:
 <211> ~~(A)~~ LENGTH: 10 amino-acids
 <212> ~~(B)~~ TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

~~(ii)~~ MOLECULE TYPE: peptide<400> ~~(xi)~~ SEQUENCE DESCRIPTION: SEQ_ID_NO: 42:Thr Gly Gly Ser Leu Ala Arg His Glu Arg
5 10<210> ~~(2)~~ INFORMATION FOR SEQ_ID_NO: 43:

~~(i)~~ SEQUENCED CHARACTERISTICS:
 <211> ~~(A)~~ LENGTH: 10 amino-acids
 <212> ~~(B)~~ TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

~~(ii)~~ MOLECULE TYPE: peptide<400> ~~(xi)~~ SEQUENCE DESCRIPTION: SEQ_ID_NO: 43:Asp His Ala Asn Leu Ala Arg His Thr Arg
5 10<210> ~~(2)~~ INFORMATION FOR SEQ_ID_NO: 44:

~~(i)~~ SEQUENCE CHARACTERISTICS:
 <211> ~~(A)~~ LENGTH: 10 amino-acids
 <212> ~~(B)~~ TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

~~(ii)~~ MOLECULE TYPE: peptide<400> ~~(xi)~~ SEQUENCE DESCRIPTION: SEQ_ID_NO: 44:Leu Gln Ser Asn Leu Val Arg His Gln Arg
5 10<210> ~~(2)~~ INFORMATION FOR SEQ_ID_NO: 45:

~~(i)~~ SEQUENCE CHARACTERISTICS:
 <211> ~~(A)~~ LENGTH: 10 amino-acids
 <212> ~~(B)~~ TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

~~(ii)~~ MOLECULE TYPE: peptide<400> ~~(xi)~~ SEQUENCE DESCRIPTION: SEQ_ID_NO: 45:Arg Lys Asp Val Leu Val Ser His Val Arg
5 10<210> ~~(2)~~ INFORMATION FOR SEQ_ID_NO: 46:

~~(i)~~ SEQUENCE CHARACTERISTICS:
 <211> ~~(A)~~ LENGTH: 10 amino-acids
 <212> ~~(B)~~ TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

~~(ii)~~ MOLECULE TYPE: peptide

-continued

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID NO: 46:

Arg Arg Asp Val Leu Met Asn His Ile Arg
5 10

<210> (2) INFORMATION FOR SEQ-ID NO: 47:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino acids
 <212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

-(11) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID NO: 47:

Gln Gly Gly Asn Leu Val Arg His Leu Arg
5 10

<210> (2) INFORMATION FOR SEQ-ID NO: 48:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino acids
 <212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

-(11) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID NO: 48:

Ser Arg Asp Val Leu Arg Arg His Asn Arg
5 10

<210> (2) INFORMATION FOR SEQ-ID NO: 49:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino acids
 <212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

-(11) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID NO: 49:

Glu Lys Ala Thr Leu Ala Arg His Met Lys
5 10

<210> (2) INFORMATION FOR SEQ-ID NO: 50:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino acids PRT
 <212> (B) TYPE: amino acid
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

-(11) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ-ID NO: 50:

Gln Ala Gln Thr Leu Gln Arg His Leu Lys
5 10

<210> (2) INFORMATION FOR SEQ-ID NO: 51:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino acids
 <212> (B) TYPE: amino acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

-(11) MOLECULE TYPE: peptide

-continued

<400> (xi) SEQUENCE DESCRIPTION: SEQ_ID_NO: 51:

Ile Ala Ser Asn Leu Leu Arg His Gln Arg	
5	10

<210> (2) INFORMATION FOR SEQ_ID_NO: 52:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ_ID_NO: 52:

Arg Gly Asp His Leu Lys Asp His Ile Lys	
5	10

<210> (2) INFORMATION FOR SEQ_ID_NO: 53:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ_ID_NO: 53:

Arg Ser Asp His Leu Thr Thr His Ile Arg	
5	10

<210> (2) INFORMATION FOR SEQ_ID_NO: 54:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ_ID_NO: 54:

Gln Leu Ala His Leu Ser Thr His Lys Arg	
5	10

<210> (2) INFORMATION FOR SEQ_ID_NO: 55:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ_ID_NO: 55:

Gln Ser Val His Leu Gln Ser His Ser Arg	
5	10

<210> (2) INFORMATION FOR SEQ_ID_NO: 56:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> \rightarrow (i) SEQUENCE DESCRIPTION: SEQ-ID-NR: 56:

Gln Lys Gly His Leu Thr Glu His Arg Lys
 5 10

<210> \rightarrow INFORMATION FOR SEQ-ID-NR: 57:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> \rightarrow (i) SEQUENCE DESCRIPTION: SEQ-ID-NR: 57:

Gln Gly Gly Asn Leu Val Arg His Leu Arg
 5 10

<210> \rightarrow INFORMATION FOR SEQ-ID-NR: 58:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids PRT
 <212> (B) TYPE: amino-acid
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> \rightarrow (i) SEQUENCE DESCRIPTION: SEQ-ID-NR: 58:

Asn Gly Gly Asn Leu Gly Arg His Met Lys
 5 10

<210> \rightarrow INFORMATION FOR SEQ-ID-NR: 59:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> \rightarrow (i) SEQUENCE DESCRIPTION: SEQ-ID-NR: 59:

Ala Arg Ser Asn Leu Leu Arg His Thr Arg
 5 10

<210> \rightarrow INFORMATION FOR SEQ-ID-NR: 60:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> \rightarrow (i) SEQUENCE DESCRIPTION: SEQ-ID-NR: 60:

Leu Gln Ser Asn Leu Val Arg His Gln Arg
 5 10

<210> \rightarrow INFORMATION FOR SEQ-ID-NR: 61:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> (+i) SEQUENCE DESCRIPTION: SEQ-ID-NR: 61:

Ile	Ala	Ser	Asn	Leu	Leu	Arg	His	Gln	Arg
5									10

<210> (+2) INFORMATION FOR SEQ-ID-NR: 62:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (+i) SEQUENCE DESCRIPTION: SEQ-ID-NR: 62:

Asp	Arg	Ser	Asn	Leu	Glu	Arg	His	Thr	Arg
5									10

<210> (+2) INFORMATION FOR SEQ-ID-NR: 63:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (+i) SEQUENCE DESCRIPTION: SEQ-ID-NR: 63:

Asn	Gln	Ser	Asn	Leu	Glu	Arg	His	His	Arg
5									10

<210> (+2) INFORMATION FOR SEQ-ID-NR: 64:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (+i) SEQUENCE DESCRIPTION: SEQ-ID-NR: 64:

Gln	Gln	Ser	Asn	Leu	Val	Arg	His	Gln	Arg
5									10

<210> (+2) INFORMATION FOR SEQ-ID-NR: 65:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (+i) SEQUENCE DESCRIPTION: SEQ-ID-NR: 65:

Asn	Gly	Gly	Asn	Leu	Gly	Arg	His	Met	Lys
5									10

<210> (+2) INFORMATION FOR SEQ-ID-NR: 66:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 66:

Asn	Gly	Ala	Asn	Leu	Glu	Arg	Arg	His	Arg	Arg
5									10	

<200> (2) INFORMATION FOR SEQ ID NO: 67:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 67:

Ser	Gln	Gly	Asn	Leu	Gln	Arg	His	Gly	Arg
5									10

<200> (2) INFORMATION FOR SEQ ID NO: 68:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 68:

Ser	His	Pro	Asn	Leu	Asn	Arg	His	Leu	Lys
5									10

<200> (2) INFORMATION FOR SEQ ID NO: 69:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 69:

Thr	Pro	Gly	Asn	Leu	Thr	Arg	His	Gly	Arg
5									10

<200> (2) INFORMATION FOR SEQ ID NO: 70:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 70:

Asp	Arg	Ser	Asn	Leu	Glu	Arg	His	Thr	Arg
5									10

<200> (2) INFORMATION FOR SEQ ID NO: 71:

(i) SEQUENCE CHARACTERISTICS:

<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 71:

Asp His Ala Asn Leu Ala Arg His Thr Arg
5 10

<210> (+2) INFORMATION FOR SEQ-ID-NR: 72:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(4) MOLECULE TYPE: peptide

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 72:

Asp Arg Ser Ser Leu Thr Arg His Thr Arg
5 10

<210> (+2) INFORMATION FOR SEQ-ID-NR: 73:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(4) MOLECULE TYPE: peptide

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 73:

Glu Arg Gly Thr Leu Ala Arg His Glu Lys
5 10

<210> (+2) INFORMATION FOR SEQ-ID-NR: 74:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(4) MOLECULE TYPE: peptide

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 74:

Asp Arg Arg Leu Leu Asp Arg His Gln Arg
5 10

<210> (+2) INFORMATION FOR SEQ-ID-NR: 75:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(4) MOLECULE TYPE: peptide

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 75:

Asp Arg Ser Ser Leu Thr Arg His Thr Arg
5 10

<210> (+2) INFORMATION FOR SEQ-ID-NR: 76:

(1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(4) MOLECULE TYPE: peptide

-continued

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 76:

Glu Arg Thr Ser Leu Ser Arg His Ile Arg	
5	10

<210> (+1) INFORMATION FOR SEQ-ID-NR: 77:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(2) MOLECULE TYPE: peptide

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 77:

Ser Ala Gly Thr Leu Val Arg His Ser Lys	
5	10

<210> (+1) INFORMATION FOR SEQ-ID-NR: 78:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(2) MOLECULE TYPE: peptide

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 78:

Gln Ala Gln Thr Leu Gln Arg His Leu Lys	
5	10

<210> (+1) INFORMATION FOR SEQ-ID-NR: 79:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(2) MOLECULE TYPE: peptide

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 79:

Glu Lys Ala Thr Leu Ala Arg His Met Lys	
5	10

<210> (+1) INFORMATION FOR SEQ-ID-NR: 80:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(2) MOLECULE TYPE: peptide

<400> (+1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 80:

Thr Gly Gly Ser Leu Ala Arg His Glu Arg	
5	10

<210> (+1) INFORMATION FOR SEQ-ID-NR: 81:

(1) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10 amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(2) MOLECULE TYPE: peptide

-continued

<400> (xi) SEQUENCE DESCRIPTION: SEQ_ID_NO: 81:

Arg Gln Ser Thr Leu Gly Arg His Thr Arg
 5 10

<210> (2) INFORMATION FOR SEQ_ID_NO: 82:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide<400> (xi) SEQUENCE DESCRIPTION: SEQ_ID_NO: 82:

Glu Lys Ala Thr Leu Ala Arg His Met Lys
 5 10

<210> (2) INFORMATION FOR SEQ_ID_NO: 83:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide<400> (xi) SEQUENCE DESCRIPTION: SEQ_ID_NO: 83:

Gln Ala Gln Thr Leu Gln Arg His Leu Lys
 5 10

<210> (2) INFORMATION FOR SEQ_ID_NO: 84:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide<400> (xi) SEQUENCE DESCRIPTION: SEQ_ID_NO: 84:

Glu Arg Gly Thr Leu Ala Arg His Glu Lys
 5 10

<210> (2) INFORMATION FOR SEQ_ID_NO: 85:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide<400> (xi) SEQUENCE DESCRIPTION: SEQ_ID_NO: 85:

Gly Arg Asp Ala Leu Ala Arg His Gln Lys
 5 10

<210> (2) INFORMATION FOR SEQ_ID_NO: 86:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino-acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 86:

Arg Gly Pro Asp Leu Ala Arg His Gly Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 87:

(1) SEQUENCE CHARACTERISTICS:
<211> (a) LENGTH: 10 amino-acids
<212> (b) TYPE: amino-acid PRT
(c) STRANDEDNESS:
(d) TOPOLOGY: unknown

(4) MOLECULE TYPE: peptide<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 87:

Ser Arg Asp Val Leu Arg Arg His Asn Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 88:

(1) SEQUENCE CHARACTERISTICS:
<211> (a) LENGTH: 10 amino-acids
<212> (b) TYPE: amino-acid PRT
(c) STRANDEDNESS:
(d) TOPOLOGY: unknown

(4) MOLECULE TYPE: peptide<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 88:

Arg Arg Asp Val Leu Met Asn His Ile Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 89:

(1) SEQUENCE CHARACTERISTICS:
<211> (a) LENGTH: 10 amino-acids
<212> (b) TYPE: amino-acid PRT
(c) STRANDEDNESS:
(d) TOPOLOGY: unknown

(4) MOLECULE TYPE: peptide<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 89:

Arg Lys Asp Val Leu Val Ser His Val Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 90:

(1) SEQUENCE CHARACTERISTICS:
<211> (a) LENGTH: 10 amino-acids
<212> (b) TYPE: amino-acid PRT
(c) STRANDEDNESS:
(d) TOPOLOGY: unknown

(4) MOLECULE TYPE: peptide<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 90:

Arg Arg Asp Val Leu Met Asn His Ile Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 91:

(1) SEQUENCE CHARACTERISTICS:
<211> (a) LENGTH: 10 amino-acids
<212> (b) TYPE: amino-acid PRT
(c) STRANDEDNESS:
(d) TOPOLOGY: unknown

(4) MOLECULE TYPE: peptide

-continued

400 (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 91:Arg Glu Asp Ala Leu Thr Ser His Glu Arg
5 10210 (2) INFORMATION FOR SEQ ID NO: 92:

(1) SEQUENCE CHARACTERISTICS:

211 (A) LENGTH: 10 amino-acids
212 (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

400 (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 92:Arg Val Asp Ala Leu Glu Ala His Arg Arg
5 10210 (2) INFORMATION FOR SEQ ID NO: 93:

(1) SEQUENCE CHARACTERISTICS:

211 (A) LENGTH: 10 amino-acids
212 (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

400 (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 93:Asp Arg Ser Ser Leu Thr Arg His Thr Arg
5 10210 (2) INFORMATION FOR SEQ ID NO: 94:

(1) SEQUENCE CHARACTERISTICS:

211 (A) LENGTH: 10 amino-acids
212 (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

400 (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 94:Glu Arg Thr Ser Leu Ser Arg His Ile Arg
5 10210 (2) INFORMATION FOR SEQ ID NO: 95:

(1) SEQUENCE CHARACTERISTICS:

211 (A) LENGTH: 10 amino-acids
212 (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

400 (x1) SEQUENCE DESCRIPTION: SEQ ID NO: 95:Gly Ala Arg Ser Leu Thr Arg His Gln Arg
5 10210 (2) INFORMATION FOR SEQ ID NO: 96:

(1) SEQUENCE CHARACTERISTICS:

211 (A) LENGTH: 10 amino-acids
212 (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(11) MOLECULE TYPE: peptide

-continued

<600> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 96:

Thr Gly Gly Ser Leu Ala Arg His Glu Arg
5 10

<210> (2) INFORMATION FOR SEQ ID NO: 97:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 97:

Gln Arg Ala Ser Leu Ala Ser His Met Arg
5 10

<210> (2) INFORMATION FOR SEQ ID NO: 98:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 98:

Asn Arg Asp Thr Leu Thr Arg His Ser Lys
5 10

<210> (2) INFORMATION FOR SEQ ID NO: 99:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 99:

Glu Arg Gly Thr Leu Ala Arg His Glu Arg
5 10

<210> (2) INFORMATION FOR SEQ ID NO: 100:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 100:

Arg Gly Asp Ala Leu Thr Ser His Glu Arg
5 10

<210> (2) INFORMATION FOR SEQ ID NO: 101:

(i) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> *(i) SEQUENCE DESCRIPTION: SEQ-ID-NOT-101:

Arg Ala Asp Ala Leu Met Val His Lys Arg
5 10

<210> +(2) INFORMATION FOR SEQ-ID-NOT-102:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10-amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> *(i) SEQUENCE DESCRIPTION: SEQ-ID-NOT-102:

Arg Gln Asp Thr Leu Val Gly His Glu Arg
5 10

<210> +(2) INFORMATION FOR SEQ-ID-NOT-103:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10-amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> *(i) SEQUENCE DESCRIPTION: SEQ-ID-NOT-103:

Arg Gln Ser Thr Leu Val Arg His Thr Arg
5 10

<210> +(2) INFORMATION FOR SEQ-ID-NOT-104:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10-amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> *(i) SEQUENCE DESCRIPTION: SEQ-ID-NOT-104:

Arg Ala Ala Asp Leu Asn Arg His Val Arg
5 10

<210> +(2) INFORMATION FOR SEQ-ID-NOT-105:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10-amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> *(i) SEQUENCE DESCRIPTION: SEQ-ID-NOT-105:

Arg Lys Asp Val Leu Val Ser His Val Arg
5 10

<210> +(2) INFORMATION FOR SEQ-ID-NOT-106:

(i) SEQUENCE CHARACTERISTICS:
 <211> (A) LENGTH: 10-amino-acids
 <212> (B) TYPE: amino-acid PRT
 (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> (*1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 106:

Arg Arg Asp Val Leu Met Asn His Ile Arg
5 10

<210> (*2) INFORMATION FOR SEQ-ID-NR: 107:

(+1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(+1) MOLECULE TYPE: peptide

<400> (*1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 107:

Arg Ser Asp Thr Leu Lys Lys His Gly Lys
5 10

<210> (*2) INFORMATION FOR SEQ-ID-NR: 108:

(+1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(+1) MOLECULE TYPE: peptide

<400> (*1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 108:

Arg Gly Pro Asp Leu Ala Arg His Gly Arg
5 10

<210> (*2) INFORMATION FOR SEQ-ID-NR: 109:

(+1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(+1) MOLECULE TYPE: peptide

<400> (*1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 109:

Ala Arg Glu Val Leu Gln Arg His Thr Arg
5 10

<210> (*2) INFORMATION FOR SEQ-ID-NR: 110:

(+1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(+1) MOLECULE TYPE: peptide

<400> (*1) SEQUENCE DESCRIPTION: SEQ-ID-NR: 110:

Arg Glu Asp Val Leu Ile Arg His Gly Lys
5 10

<210> (*2) INFORMATION FOR SEQ-ID-NR: 111:

(+1) SEQUENCE CHARACTERISTICS:
<211> (A) LENGTH: 10 amino acids
<212> (B) TYPE: amino acid PRT
(C) STRANDEDNESS:
(D) TOPOLOGY: unknown

(+1) MOLECULE TYPE: peptide

-continued

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 111:

Arg Ser Asp Leu Leu Gln Arg His His Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 112:

(i) SEQUENCE CHARACTERISTICS:
 <211> (a) LENGTH: 10 amino acids
 <212> (b) TYPE: amino acid PRT
 (c) STRANDEDNESS:
 (d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 112:

Arg Leu Asp Gly Leu Arg Thr His Leu Lys
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 113:

(i) SEQUENCE CHARACTERISTICS:
 <211> (a) LENGTH: 10 amino acids
 <212> (b) TYPE: amino acid PRT
 (c) STRANDEDNESS:
 (d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 113:

Arg Gly Asp Ala Leu Thr Ser His Glu Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 114:

(i) SEQUENCE CHARACTERISTICS:
 <211> (a) LENGTH: 10 amino acids
 <212> (b) TYPE: amino acid PRT
 (c) STRANDEDNESS:
 (d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 114:

Arg Ala Asp Ala Leu Met Val His Lys Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 115:

(i) SEQUENCE CHARACTERISTICS:
 <211> (a) LENGTH: 10 amino acids
 <212> (b) TYPE: amino acid PRT
 (c) STRANDEDNESS:
 (d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

<400> (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 115:

Arg Val Asp Ala Leu Glu Ala His Arg Arg
 5 10

<210> (2) INFORMATION FOR SEQ ID NO: 116:

(i) SEQUENCE CHARACTERISTICS:
 <211> (a) LENGTH: 10 amino acids
 <212> (b) TYPE: amino acid PRT
 (c) STRANDEDNESS:
 (d) TOPOLOGY: unknown

(ii) MOLECULE TYPE: peptide

-continued

<400> ~~(+i) SEQUENCED DESCRIPTION: SEQ ID NO: 116:~~

Arg Arg Asp Val Leu Leu Asn His Ile Arg
 5 10

<210> ~~(+2) INFORMATION FOR SEQ ID NO: 117:~~

(+1) SEQUENCE CHARACTERISTICS:
 <211> (+) LENGTH: 10 amino acids
 <212> (B) TYPE: amino acid PRT
 (+C) STRANDEDNESS:
 (+D) TOPOLOGY: unknown

(+4) MOLECULE TYPE: peptide

<400> ~~(+i) SEQUENCE DESCRIPTION: SEQ ID NO: 117:~~

Arg Glu Asp Val Leu Ile Arg His Gly Lys
 5 10

<210> ~~(+2) INFORMATION FOR SEQ ID NO: 118:~~

(+1) SEQUENCE CHARACTERISTICS:
 <211> (+) LENGTH: 10 amino acids
 <212> (B) TYPE: amino acid PRT
 (+C) STRANDEDNESS:
 (+D) TOPOLOGY: unknown

(+4) MOLECULE TYPE: peptide

<400> ~~(+i) SEQUENCE DESCRIPTION: SEQ ID NO: 118:~~

Arg Ser Asp Leu Leu Gln Arg His His Lys
 5 10

<210> ~~(+2) INFORMATION FOR SEQ ID NO: 119:~~

(+1) SEQUENCE CHARACTERISTICS:
 <211> (+) LENGTH: 10 amino acids
 <212> (B) TYPE: amino acid PRT
 (+C) STRANDEDNESS:
 (+D) TOPOLOGY: unknown

(+4) MOLECULE TYPE: peptide

<400> ~~(+i) SEQUENCE DESCRIPTION: SEQ ID NO: 119:~~

Lys Ala Ser Asn Leu Val Ser His Ile Arg
 5 10

<210> ~~(+2) INFORMATION FOR SEQ ID NO: 120:~~

(+1) SEQUENCE CHARACTERISTICS:
 <211> (+) LENGTH: 10 amino acids
 <212> (B) TYPE: amino acid PRT
 (+C) STRANDEDNESS:
 (+D) TOPOLOGY: unknown

(+4) MOLECULE TYPE: peptide

<400> ~~(+i) SEQUENCE DESCRIPTION: SEQ ID NO: 120:~~

Leu Arg His Asn Leu Glu Thr His Met Arg
 5 10

<210> ~~(+2) INFORMATION FOR SEQ ID NO: 121:~~

(+1) SEQUENCE CHARACTERISTICS:
 <211> (+) LENGTH: 10 base pairs
 <212> (B) TYPE: nucleic acid DNA
 (+C) STRANDEDNESS: single
 (+D) TOPOLOGY: linear

<400> ~~(+i) SEQUENCED DESCRIPTION: SEQ ID NO: 121:~~

-continued

CGCAGAAGCC

10

<210> 121 INFORMATION FOR SEQ ID NO: 122:

(1) SEQUENCE CHARACTERISTICS:
 (2) (A) LENGTH: 10 base-pairs
 (2) (B) TYPE: nucleic-acid DNA
 (3) STRANDEDNESS: single
 (4) TOPOLOGY: linear

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 122:

TCCAGAAGCC

10

<210> 122 INFORMATION FOR SEQ ID NO: 123:

(1) SEQUENCE CHARACTERISTICS:
 (2) (A) LENGTH: 10 base-pairs
 (2) (B) TYPE: nucleic-acid DNA
 (3) STRANDEDNESS: single
 (4) TOPOLOGY: linear

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 123:

CCGAGGTGAG

10

<210> 123 INFORMATION FOR SEQ ID NO: 124:

(1) SEQUENCE CHARACTERISTICS:
 (2) (A) LENGTH: 11 amino-acids
 (2) (B) TYPE: amino-acid PRT
 (2) (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(4) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 124:

Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn
5 10

<210> 124 INFORMATION FOR SEQ ID NO: 125:

(1) SEQUENCE CHARACTERISTICS:
 (2) (A) LENGTH: 7 amino-acids
 (2) (B) TYPE: amino-acid PRT
 (2) (C) STRANDEDNESS:
 (D) TOPOLOGY: unknown

(4) MOLECULE TYPE: peptide

<400> (1) SEQUENCE DESCRIPTION: SEQ ID NO: 125:

Pro Lys Lys Lys Arg Lys Val

We claim:

1. A library of DNA sequences, each sequence encoding a zinc finger polypeptide for display, the zinc finger polypeptide comprising at least one zinc finger having partially randomised allocation of amino acids, the partially randomised zinc finger having a random allocation of amino acids at positions -1, +2, +3 and +6 and at least one of positions +1, +5 or +8, position +1 being the first amino acid in the α -helix of the zinc finger. 55
2. A library according to claim 1, wherein the partially randomised zinc finger has random allocation of amino acids at each of positions +1, +5 and +8. 60
3. A library according to claim 1, wherein the encoded partially randomised zinc finger comprises the zinc finger of the Zif 268 polypeptide.
4. A library according to claim 1 as a fusion with a DNA sequence encoding the minor coat protein of bacteriophage fd. 65

5. A method of designing a zinc finger polypeptide for binding to a particular target DNA sequence, comprising the steps of:

comparing the binding to one or more DNA triplets of each of a plurality of zinc finger polypeptides having a partially randomized zinc finger, the zinc finger polypeptides being encoded by a library in accordance with claim 1; and

selecting those nucleic acid sequences encoding randomised zinc fingers which bind to the target DNA sequence.

6. A method of designing a zinc finger polypeptide for binding to a particular target DNA sequence, comprising the steps of:

screening against at least a portion of the target DNA sequence, a plurality of zinc finger polypeptides having

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